



## BIOS Update Release Notes

### **PRODUCTS: NUC5CPYH, NUC5PPYH, NUC5PGYH (Standard BIOS)**

**BIOS Version 0078 - PYBSWCEL.86A.0078.2019.0807.1133**

#### **About This Release:**

- Date: August 7, 2019
- ROM Image Checksum: 0x2081
- TXE Firmware: 02.00.05.3117 PV
- Framework BIOS Reference Code: Based on 1.2.1
- Integrated Graphics
  - Option ROM: Build 1014 PC 14.34
  - UEFI Driver: 8.0.1033
- LAN
  - Option ROM: None
- Visual Bios: 2.2.20
- Supported Flash Devices:

WinBond	W25Q64FWSSIG	8MB (1.8V)
MACRONIX	MX25U6435FM2I	8MB (1.8V)
- Additional Microcode Updates included only in .BIO File:
  - M01406C3368
  - M01406C4411

#### **New Fixes/Features:**

- Updated BIOS code for security fixes.

**BIOS Version 0077 - PYBSWCEL.86A.0077.2019.0606.1631**

#### **About This Release:**

- Date: June 6, 2019
- ROM Image Checksum: 0xD4C1
- TXE Firmware: 02.00.05.3117 PV
- Framework BIOS Reference Code: Based on 1.2.1
- Integrated Graphics:
  - Option ROM: Build 1014 PC 14.34
  - UEFI Driver: 8.0.1033
- LAN Option ROM: Realtek
- Visual Bios: 2.2.20
- Supported Flash Devices:

WinBond	W25Q64FWSSIG	8MB (1.8V)
MACRONIX	MX25U6435FM2I	8MB (1.8V)
- Microcode Updates included in .ROM & .BIO Files:
  - M01406C3\_368.TXT
  - M01406C4\_411.TXT

#### **New Fixes/Features:**

- Updated CPU microcode for security fix.
- Modified the chassis enclosure type to 0x23.

\*Other names and brands may be claimed as the property of others.

**BIOS Version 0076 - PYBSWCEL.86A.0076.2019.0321.1658**

**About This Release:**

- Date: March 21, 2019
- TXE Firmware: 02.00.05.3117 PV
- Framework BIOS Reference Code: Based on 1.2.1
- Integrated Graphics
  - Option ROM: Build 1014 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Updated BIOS code for security fixes.

**BIOS Version 0075 - PYBSWCEL.86A.0075.2018.0917.1423**

**About This Release:**

- Date: September 17, 2018
- TXE Firmware: 02.00.05.3117 PV
- Framework BIOS Reference Code: Based on 1.2.1
- Integrated Graphics
  - Option ROM: Build 1014 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Fixed issue where there is no display during PXE boot with Fedora 14.

**BIOS Version 0074 - PYBSWCEL.86A.0074.2018.0709.1332**

**About This Release:**

- Date: July 9, 2018
- TXE Firmware: 02.00.05.3117 PV
- Framework BIOS Reference Code: Based on 1.2.1
- Integrated Graphics:
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Disabled and removed Intel® Ready Mode Technology related items from BIOS setup for Intel Security fix.

**BIOS Version 0073 - PYBSWCEL.86A.0073.2018.0614.1654**

**About This Release:**

- Date: June 14, 2018
- TXE Firmware: 02.00.05.3117 PV
- Framework BIOS Reference Code: Based on 1.2.1
- Integrated Graphics
  - o Option ROM: Build 1007 PC 14.34
  - o UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Improved compatibility and stability with SSDs
- Security enhancements

<b>BIOS Version 0069 - PYBSWCEL.86A.0069.2018.0314.1745</b>
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**About This Release:**

- Date: March 14, 2018
- TXE Firmware: 02.00.05.3117 PV
- Framework BIOS Reference Code: Based on 1.2.1
- Integrated Graphics:
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Updated CPU Microcode (Security Advisory-00088)
- Fixed issue Where Samsung EVO SSD is not seen after updating to interim BIOS version 0066 or 0068.
- Fixed issue with Security Jumper menu item.
- Updated BIOS for CPU D-stepping support.
- Fixed the issue where the system wouldn't boot with some 8GB memory modules.
- Enabled BIOS write protect.
- Added the setup option "Allow UEFI Third Party Driver loaded" and set the default state to disabled.

<b>BIOS Version 0064 - PYBSWCEL.86A.0064.2017.0815.1055</b>
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**About This Release:**

- Date: August 15, 2017
- TXE Firmware: 02.00.02.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - o Option ROM: Build 1007 PC 14.34
  - o UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Changed the defaults of setup item "Intel Dynamic Power Technology" to custom and setup item "OS ACPI C2 Report" to disabled.

<b>BIOS Version 0063 - PYBSWCEL.86A.0063.2017.0807.1503</b>
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**About This Release:**

- Date: August 7, 2017
- TXE Firmware: 02.00.02.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - o Option ROM: Build 1007 PC 14.34
  - o UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

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- Fixed the issue where the wrong BIOS ID string was getting written into the Windows\* registry.

**BIOS Version 0062 - PYBSWCEL.86A.0062.2017.0308.1328**

**About This Release:**

- Date: March 8, 2017
- TXE Firmware: 02.00.02.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Fixed the BIOS power button recovery.

**BIOS Version 0061 - PYBSWCEL.86A.0061.2017.0110.1407**

**About This Release:**

- Date: January 10, 2017
- TXE Firmware: 02.00.02.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Security enhancements.

**BIOS Version 0060 - PYBSWCEL.86A.0060.2016.1228.1604**

**About This Release:**

- Date: December 28, 2016
- TXE Firmware: 02.00.02.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Security Enhancements
- Fixed TPM2.0 error

**BIOS Version 0058 - PYBSWCEL.86A.0058.2016.1102.1842**

**About This Release:**

- Date: November 02, 2016
- TXE Firmware: 02.00.02.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033

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- Visual Bios: 2.2.20

**New Fixes/Features:**

- Security Enhancements

**BIOS Version - PYBSWCEL.86A.0057.2016.1012.1134**

**About This Release:**

- Date: October 12, 2016
- TXE Firmware: 02.00.02.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Fixed TPM2.0 error.

**BIOS Version 0056 - PYBSWCEL.86A.0056.2016.0901.1751**

**About This Release:**

- Date: September 01, 2016
- TXE Firmware: 02.00.02.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Added patch code for SA50011
- Updated the NVMe module to NVMe\_04.
- Added patch code for EBDA.
- Added patch code for ITK.
- Updated BootScriptHide to 02.
- Updated TCG to TCG\_10

**BIOS Version 0055 - PYBSWCEL.86A.0055.2016.0812.1130**

**About This Release:**

- Date: August 12, 2016
- TXE Firmware: 02.00.02.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Fixed the issue where some memory would cause the NUC not to boot.

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**BIOS Version 0054 - PYBSWCEL.86A.0054.2016.0503.1546**

**About This Release:**

- Date: May 03, 2016
- TXE Firmware: 02.00.02.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.20

**New Fixes/Features:**

- Hid "NFC" setup item.
- Improved BIOS update function by disabling keyboard and power button during the flash/recovery process.
- Removed WlanDynamicSolution setup item but kept WiFi WRDD.
- Updated Intel Visual BIOS to 2.2.20.
- Hotfix to remove download driver and automatic BIOS update feature.

**BIOS Version 0053 - PYBSWCEL.86A.0053.2016.0401.1154**

**About This Release:**

- Date: April 1, 2016
- TXE Firmware: 02.00.02.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.19

**New Fixes/Features:**

- Added support to allow the use of alternative wireless cards.
- Updated CPU microcode.
- Improved power button menu and F4 recovery by:
  - Removing the G3 power button recovery
  - Adding BIOS ID information prompt
  - Allowing the user to cancel the recovery by selecting [ESC] within 20 seconds of starting the process
  - Added information about the progress of the recovery process.
- Fixed an issue where the **Wi-Fi Dynamic Regulatory Solution** would default to disabled when the BIOS is updated from 0044 to 0047, 0048, or 0049
- Changed the operating system shutdown temperature limit to 115° C
- Fixed an issue where **After Power Failure** would default to **Stay Off**
- Fixed an issue where NULL is used as a user password.
- Fixed a SMBIOS system slot information issue

**BIOS Version 0050 - PYBSWCEL.86A.0050.2016.0223.1234**

**About This Release:**

- Date: February 23, 2016
- TXE Firmware: 02.00.02.2092 PV

- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.19

**New Fixes/Features:**

- Changed the limit for shutdown to 115 degrees.

**BIOS Version 0048 - PYBSWCEL.86A.0048.2015.1210.1424**

**About This Release:**

- Date: December 10, 2015
- TXE Firmware: 02.00.02.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.19

**New Fixes/Features:**

- Changed the SMBIOS Type 41 Information.
- Updated Ethernet device to show "Realtek ALC283" as "Onboard LAN".
- Improved SD card compatibility in Linux OS.

**BIOS Version 0047 - PYBSWCEL.86A.0047.2015.1123.0950**

**About This Release:**

- Date: November 23, 2015
- TXE Firmware: 2.0.0.2092 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.19

**New Fixes/Features:**

- Updated TXE to version 2092
- Added MFGDMI tool support for UEFI BIOS.
- Improved SD card compatibility with Linux OS's.
- Added the "Wi-Fi Dynamic Regulatory Solution" setup item for Indonesia WIFI lock frequency.

**BIOS Version 0044 - PYBSWCEL.86A.0044.2015.0925.1143**

**About This Release:**

- Date: September, 25, 2015
- TXE Firmware: 2.0.0.2084 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.19

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**New Fixes/Features:**

- Updated processor support.
- Updated TXE to version 2084.
- Fixed issue that the settings change cannot be saved as BIOS file in ITK.
- Changed the "OS selection" dropdown box, replacing the "Windows 8.x" option with "Windows 8.x/Windows 10".
- Fixed issue where computer won't power on if a flash disk is connected to a USB port.
- Fixed issue where the CIR wasn't working when the NUC awoke from sleep.

<b>BIOS Version 0043 - PYBSWCEL.86A.0043.2015.0904.1904</b>
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**About This Release:**

- Date: September 4, 2015
- TXE Firmware: 2.0.0.2077 PV
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.16

**New Fixes/Features:**

- Fixed issue with WHCK WindowsToGo Boot Test.
- Fixed issue where SD host adapter incorrectly shows in Windows 7 Device Manager.
- Fixed issue where a customized .BIO file cannot be saved in Intel® Integrator Toolkit.
- Fixed issue with SMBIOS type10 onboard devices.
- Fixed issue where a thermal trip event appears twice in the event log.
- Fixed issue where system hangs at POST code B4.
- Changed the default value for Platform Trust Technology.

<b>BIOS Version 0040 - PYBSWCEL.86A.0040.2015.0814.1353</b>
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**About This Release:**

- Date: August 14, 2015
- TXE Firmware: 2.0.0.2077 Beta
- Framework BIOS Reference Code: Based on 1.1.0
- Integrated Graphics
  - Option ROM: Build 1007 PC 14.34
  - UEFI Driver: 8.0.1033
- Visual Bios: 2.2.16

**New Fixes/Features:**

- Updated TXE firmware to version 2077.
- Updated processor support.
- Fixed issue where system hangs during PXE boot.
- Fixed issue where USB mouse does not work.
- Changed the prompt for F8 recovery to show Windows 8.1/10.
- Fixed SD card compatibility issue.
- Fixed issue with USB device icon.
- Fixed issue with USB charging in S5.

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- Fixed issue with RTC wakeup in S3/S4.
- Fixed issue where Express BIOS Update fails if Legacy Mode is disabled in BIOS.
- Added support for Intel® NUC Kit NUC5PGYH.
- Updated VBIOS to version 1007 and GOP to version 8.0.1033.
- Fixed issue where power LED does not blink when memory is not installed or during flash update.
- Fixed issue where CPU fan state is incorrect when the system is in Ready Mode.
- Fixed issue where SD bootable device name is incorrect.
- Fixed issue where L2 Cache value is incorrect in BIOS.
- Fixed issue where screen blinks with keyboard input in DOS.

**Known Errata:**

- Event log shows CMOS Checksum Error if BIOS is downgraded to previous version (due to BIOS reference code update).

<b>BIOS Version 0031 - PYBSWCEL.86A.0031.2015.0601.1712</b>
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**About This Release:**

- Date: June 1, 2015
- TXE Firmware: 2.0.0.2060 Beta
- Framework BIOS Reference Code: Based on 1.0.1
- Integrated Graphics
  - Option ROM: Build 1005 PC 14.34
  - UEFI Driver: 8.0.1028
- Visual Bios: 2.2.16

**New Fixes/Features:**

- Fixed issue where Express BIOS Update
- Fixed USB 2.0 port wake from S5 issue.
- Updated Intel® Integrator Toolkit:
  - Added OS ACPI C2 Report setting
  - Added IGD Secondary video port setting
- Added BIOS option on the Devices and Peripherals > SATA page to enable or disable HDD Activity LED.
- Fixed issue where L2 cache shows as 2M.
- Disabled Serial IO driver for Windows 7.
- Fixed CPU fan issue with Intel Ready Mode Technology.

<b>BIOS Version 0027 - PYBSWCEL.86A.0027.2015.0507.1758</b>
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**About This Release:**

- Date: May 7, 2015
- TXE Firmware: 2.0.0.2060 Beta
- Framework BIOS Reference Code: Based on 1.0.1
- Integrated Graphics
  - Option ROM: Build 1005 PC 14.34
  - UEFI Driver: 8.0.1028
- Visual Bios: 2.2.16

**New Fixes/Features:**

- Initial production BIOS release

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